

JACOB D. HART

SENIOR SOFTWARE ENGINEER

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STRENGTHS

- 10 years professional game development experience
- Fluent in C++ and C#. Proficient in C, JavaScript, and Python
- Daily experience with common software engineering practices and tools (Perforce, Git, Agile/Scrum, bug tracking)

SELECTED PROJECTS & WORK EXPERIENCE

Self-Employed

Senior Software Engineer, 2016-present

- Independently developed Speedboats.io, a multiplayer 3D nautical combat game that has gained over 1.7 million unique players to date. Wrote gameplay, graphics, and sound systems, as well as the netcode and server.
- Developed Outgun.io, another multiplayer vehicle combat game, and successfully sold it to a major games portal. Was solely responsible for all gameplay systems, as well as AI, netcode, and server.

Batman: Arkham Underworld

Turbine, Inc.

Senior Software Engineer, 2013-2016

- Worked closely with designers to develop AI, pathfinding, and perception systems
- Authored the in-game base builder, which designers and players utilized to create level content
- Devised an intuitive, momentum-based camera controller for multi-touch devices
- Architected and implemented localization system

Mind Your Own Budget

K20 Center

Lead Developer, 2012-2013

- Authored furniture system that allowed the player to upgrade and customize their environment
- Translated design to detailed technical specifications
- Organized group code reviews and mentored junior developers

Energy and Me

K20 Center

Lead Developer, 2011-2013

- Developed and maintained world editor
- Implemented launcher and patching system, removing the need for customers to do manual reinstallations
- Established continuous integration servers for Windows and OS X, which greatly increased build reliability

Pathways to Success

K20 Center

Software Developer, 2009-2011

- Devised a system for dynamically generating 3D buildings, which formed the core of the gameplay environment
- Developed a radiosity solver to generate static lightmaps that rendered efficiently on commodity hardware

SELECTED PERSONAL PROJECTS

- *Gray Day (2016)*: A tape echo simulation inspired by the classic Echoplex and Roland Space Echo units
- *Cubephoria (2012)*: A music-controlled, beat-aware LED cube
- *PyDNA (2011)*: A program that uses genetic algorithms to mimic an arbitrary data source

Source code and videos are available at jake-hart.com.

EDUCATION

University of Oklahoma, Bachelor's degree in International and Area Studies